



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D2741
Job Sheet 190927



Part No: D2741

Job Qty: 40 pcs

Part Name: Replacement Blade



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/20/19

Job Tracking No:

Due Date: 4/15/19

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV E IPP Rev: D 00.11.15 Removed P/O turning - in house process EC IPP Rev: E 06-03-20 As Per
Rev C JLM IPP Rev: F

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Bandsaw - 1	40 pcs	4/15/19	4/15/19	0.00	3.11	Bandsaw - 1		DJP 19-03-06
110	HAAS 4 Axis - B4B	40 pcs	4/15/19	4/15/19	0.00	27.45	HAAS - 1 - B4B		19/03/10
							HAAS - 2 - B4B		
							HAAS - 3 - B4B		
							HAAS - 4 - B4B		
130	QC 8	40 pcs	4/15/19	4/15/19	0.00	0.00	QC 8 - 12		19/03/13
							QC 8 - 14		
							QC 8 - 17		
							QC 8 - 20		
							QC 8 - 25		
							QC 8 - 3		
							QC 8 - 32		
							QC 8 - 33		
							QC 8 - 35		
							QC 8 - 39		
							QC 8 - 4		
							QC 8 - 44		
							QC 8 - 45		
							QC 8 - 49		
							QC 8 - 58		
							QC 8 - 8		
							QC 8 - 9		
							QC 8 - 68		
							QC 8 - 67		
							QC 8 - 1 (A)		
							QC 8 - 47		
140	Small Fab - 2 - B4B	40 pcs	4/15/19	4/15/19	0.00	0.68	Small Fab - 1 - B4B		
							Small Fab - 2 - B4B		
							Small Fab - 3 - B4B		
							Small Fab - 4 - B4B		



Container No: S159549



Part: D2741

Job No: 190927

Serial No/Batch: S159549

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Date: 03/08/19

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Plex 2/20/19 8:04 AM Dart.lajeunesse.marie

P.T.O.

NCR: 19-7238
NCR: 19-7282

9/03/13

150 QC 5	40 pcs	4/15/19	0.00 0.00	Small Fab - 5 - B4B	
				Small Fab - 6 - B4B	
				Small Fab - 7 - B4B	
				QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 42	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	MAR 13 2019 DAS 68
				QC 5 - 9	9-89
				QC 5 - 50	
				QC 5 - 30	
160 Outsource - 1 - Heat Treat	40 pcs	4/15/19		ATL002-VC	5
170 Packaging 2-1 - Receive - B4B	40 pcs	4/15/19	0.00 0.00	Packaging 2 - 1 - B4B	
				Packaging 2 - 2 - B4B	
				Packaging 2 - 3 - B4B	
				Packaging 2 - 5 - B4B	APR 05 2019
				Packaging 2 - 4 - B4B	
				Packaging 2 - 6 - B4B	
				Packaging 2 - 7 - B4B	
				Packaging 2 - 8 - B4B	
				Packaging 2 - 9 - B4B	
				Packaging 2 - 10 - B4B	
				Packaging 2 - 11 - B4B	
				Packaging 2 - 12 - B4B	
				Packaging 2 - 13 - B4B	
				Packaging 2 - 14 - B4B	
				Packaging 2 - 15 - B4B	
				Packaging 2 - 16 - B4B	
				Packaging 2 - 17 - B4B	
				Packaging 2 - 18 - B4B	
				Packaging 2 - 19 - B4B	
				Packaging 2 - 20 - B4B	
				Packaging 2 - 21 - B4B	
				Packaging 2 - 22 - B4B	
				Packaging 2 - 23 - B4B	
				Packaging 2 - 24 - B4B	
				Packaging 2 - 25 -	

39 pcs
Rec'd 38
1 scrap.
Please
scrap 1 pc
@ QC 6

						B4B	
						Packaging 2 - 26 - B4B	
						Packaging 2 - 27 - B4B	
						Packaging 2 - 28 - B4B	
						Packaging 2 - 29 - B4B	
						Packaging 2 - 30 - B4B	
						Packaging 2 - 31 - B4B	
						Packaging 2 - 32 - B4B	
						Packaging 2 - 33 - B4B	
						Packaging 2 - 34 - B4B	
						Packaging 2 - 35 - B4B	
						Packaging 2 - 36 - B4B	
180 QC 6	40 pcs	4/15/19	0.00	0.00		QC 6 - 42	
						QC 6 - 9	
						QC 6 - 68	DAS APR 10 2019 68
						QC 6 - 61	9-89
see note above							
190 Handfinish - 4-1-Assembly-B4B	40 pcs	4/15/19	0.00	2.47		Handfinish - 4 - 1 - B4B	D.R 19/04/10
						Handfinish - 4 - 10 - B4B	
						Handfinish - 4 - 11 - B4B	
						Handfinish - 4 - 12 - B4B	
						Handfinish - 4 - 13 - B4B	
						Handfinish - 4 - 14 - B4B	
						Handfinish - 4 - 15 - B4B	
						Handfinish - 4 - 2 - B4B	
						Handfinish - 4 - 3 - B4B	
						Handfinish - 4 - 4 - B4B	
						Handfinish - 4 - 5 - B4B	
						Handfinish - 4 - 6 - B4B	
						Handfinish - 4 - 7 - B4B	
						Handfinish - 4 - 8 - B4B	
Handfinish - 4 - 9 - B4B							
200 Powdercoat - 2 White GI(S)-B4B	40 pcs	4/15/19	0.00	1.02		Powdercoat - 1 - B4B	
						Powdercoat - 2 - B4B	
						Powdercoat - 3 - B4B	
						Powdercoat - 4 - B4B	D.R 19. 4-10.
START: 9:00 O.V.T 400° FINISH: 9:30							
210 QC 3	40 pcs	4/15/19	0.00	0.00		QC 3 - 10	
						QC 3 - 13	
						QC 3 - 15	
Plex 2/20/19 8:04 AM Dart.lajeunesse.marie							

						QC 3 - 17	
						QC 3 - 18	
						QC 3 - 2	
						QC 3 - 26	
						QC 3 - 28	
						QC 3 - 3	
						QC 3 - 30	
						QC 3 - 34	
						QC 3 - 36	
						QC 3 - 41	
						QC 3 - 51	
						QC 3 - 58	
						QC 3 - 59	
						QC 3 - 6	
						QC 3 - 68	
						QC 3 - 9	
						Packaging 3 - 1 - B4B	
						Packaging 3 - 2 - B4B	
						Packaging 3 - 3 - B4B	
						Packaging 3 - 4 - B4B	
						Packaging 3 - 5 - B4B	
						Packaging 3 - 6 - B4B	
						Packaging 3 - 7 - B4B	
						Packaging 3 - 8 - B4B	
						Packaging 3 - 9 - B4B	
						Packaging 3 - 10 - B4B	
						Packaging 3 - 11 - B4B	
						Packaging 3 - 12 - B4B	
						Packaging 3 - 13 - B4B	
						Packaging 3 - 14 - B4B	
						Packaging 3 - 15 - B4B	
						Packaging 3 - 16 - B4B	
						Packaging 3 - 17 - B4B	
						Packaging 3 - 18 - B4B	
						Packaging 3 - 19 - B4B	
						Packaging 3 - 20 - B4B	
						Packaging 3 - 21 - B4B	
						Packaging 3 - 22 - B4B	
						Packaging 3 - 23 - B4B	
						Packaging 3 - 24 - B4B	
						Packaging 3 - 25 - B4B	
						Packaging 3 - 26 - B4B	
						Packaging 3 - 27 - B4B	
						Packaging 3 - 28 - B4B	
220	Packaging 3-1 - Stock - B4B	40	4/15/19	0.00	0.00		
	pcs						

DAS
MAY 08 2019 40
9-89

2153880 MAY 21 2010

					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	
					Packaging 3 - 33 - B4B	
					Packaging 3 - 34 - B4B	
					Packaging 3 - 35 - B4B	
					Packaging 3 - 36 - B4B	
230 QC 21 - SA	40 pcs	4/15/19	0.00	0.00	QC 21 - SA - 21	
					QC 21 - SA - 70	
					QC 21 - SA - 53	

Part Op 100 - (Bandsaw) Cut blanks 13.850" long +0.063" -0.000"

Descriptions: 110 - HAAS CNC Vertical Machine)1-Machine per folio FA108 ***SEE NOTE 9 FOR HOLES***

130 - QC8- Inspect parts - second check)

140 - (Small Fab)1-Deburr 2-Bend per Dwg D2741

150 - (QC5- Inspect part completeness to step on W/O)

160 - Issue P/O: _____ Harden material as per Dwg D2741 Min. Ultimate Tensile Strength = 152 ksi (34-40 HRC) Min. Yield Tensile Strength = 141 ksi Test report or Certification required **Sand blast parts** *** ATTN : DO NOT ADD OIL AFTER SANDBLAST ***

170 - (Receive & Inspect for Damage & Mat'l Certs)Ensure Test report or Certification attached

180 - QC6- All purchased or subcontracted products)

190 - (Assemble as per dwg)clean with wash & wipe to remove oil

200 - (White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel)START TIME: 3:35 OVEN TEMPERATURE: 1405

FINISH TIME: 4:05 M 151749

210 - (QC3- Inspect Part Finish)

220 - (Identify as per dwg & Stock Location: _____)

230 - (QC21- Final Inspection - Work Order Release)

Job BOM				
Part / Item	Component Name	Quantity	Operation	Container
M4130NB0.500X03.000	4130 Bar 0.500 X 3.00	46.1640 ft (1.1541 ea)	100-Bandsaw - 1	<u>S132661</u>

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
100-Bandsaw - 1	M4130NB0.500X03.000	46	40	0

Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Blade	1.500Inches $\pm$ 0.010	1.510 1.490	1.499	Vern.
2	Blade	0.715Inches $\pm$ 0.010	0.725 0.705	0.714	Vern.
3	Blade	0.516Inches + 0.008 - 0.001	0.524 0.515	0.516 ^s Diameter	Vern.
4	Blade	2.000Inches $\pm$ 0.030	2.030 1.970	2.020	Vern.
5	Blade	13.750Inches $\pm$ 0.010	13.760 13.740	13.753	H. Gage
6	Blade	1.060Inches + 0.012 - 0.001	1.072 1.059	1.060 ^s Diameter	C. Bore Vern.
7	Blade	0.150Inches $\pm$ 0.010	0.160 0.140	0.150	D. Gage
8	Blade	2.930Inches $\pm$ 0.030	2.960 2.900	2.930	Vern.
9	Blade	0.375Inches $\pm$ 0.010	0.385 0.365	0.382	Vern.
10	Blade	0.250Inches $\pm$ 0.030	0.280 0.220	0.250	Vern.
11	Blade	0.250Inches $\pm$ 0.030	0.280 0.220	0.250	Vern.

DIP 190306

Plex 2/20/19 8:04 AM Dart.lajeunesse.marie

ml July 5, 2019

Entered: DIP Date: 19-03-06



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only

NCR No. 19-7238

Job: 19027		DISPOSITION		DEPARTMENT/PROCESS				Route update only											
Part No. D2741		Rework ☐ Scrap ☒ Use-as-is ☐		Skid-tube ☐ Machining ☒ Large Fab ☐		Cross tube ☐ Small Fab ☐ Finishing ☐		Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐		Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐									
Date: 19-03-06		Sequence #: 110		QTY Affected: 1		MRB (QS1042)													
Description Work Order Deviation				Disposition															
- PROGRAM OFF SET REDUCED REQUIRED WALL THICKNESS				- SCRAP															
Root Cause				FAULT CATEGORY															
Operator ☒ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐				Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Other/Details: ☐				Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐				Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☒				Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread ☐			
Completed By DIP 19-03-06				Lead hand / Supervisor L.E 19-03-06				QC / QA Coordinator MAR 06 2019 DAS 68 9-89											



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO042896



Supplier: MEI001-VC
Metcor Inc.
560 Boul. Arthur Sauve
Saint-Eustache
QC
J7R 5A8 Canada
Phone: 450 473 1884
Fax: 450 491 5498

Attention: Cloutier, Danielle

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO042896
PO Date: 3/14/19
Due Date: 3/28/19
**Purchase Order
Revision:**
Revision Date:
Ship-To Contact: Phone:

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	190927	D2741	Replacement Blade : Various STC's Issue P/O: Harden material as per Dwg D2741 Min. Ultimate Tensile Strength = 152 ksi (34-40 HRC) Min. Yield Tensile Strength = 141 ksi Test report or Certification required 4130 bar 0.500 x 3.00 **Sand blast parts** *** ATTN : DO NOT ADD OIL AFTER SANDBLAST ***	Firmed	-	3/28/19	39 pcs	0 pcs	39 pcs	\$6.50/pcs	\$253.50

DAS
68
9-89

30X APR 05 2019

Rec'd only 38
I used for testing
please
1pc @ QC.



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER
PO042896



Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
2	190521	RBW6705G02131-3G	Rigging Pin Assembly N2 (Outsource process - Heat Treat) 1--Issue P/O to Metcore ; P/O RC: 26-30 2-Bead blast 3- Certificate of Conformity is required Tool Steel Round Bar 0.250 **Ship directly to Groupe Altech Part made from 01R Tool Steel Rigging Pin Assembly N2 -Issue P/O to Groupe Altech: P/O -Zinc plate, ASTM B633 TYPE 1 SC2 - Certificate of Conformity is required	Firmed	-	3/28/19	9 pcs	0 pcs	9 pcs	\$0.01/pcs	\$0.09
Line Item Note *Please once Heat Treat Done ship to Group Altech*											
Grand Total:										\$253.59	

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 3/25/19 3:17 PM dart.Lussier.Patrick

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Reçu de livraison

Delivery Receipt

BON DE TRAVAIL Order	EXPÉDITEUR Shipper ID	BON D'EXPÉDITION Shipper
334971	1	136067

EXPÉDITION COMPLÈTE / Shipped Complete

CLIENT /Customer 215

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053



LIVRÉ À /Shipped To

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

COMMANDE DU CLIENT Customer PO	BON DE LIVRAISON DU CLIENT Customer Shipper No.	TYPE DE MATÉRIEL Material Type	DATE DE LA COMMANDE Order Date	TRANSPORTEUR Carrier
42896		4130	2019/3/14	client

QUANTITÉ Quantity	No. PIÈCE / Part No.	NOM DE LA PIÈCE / Part Name	DESCRIPTION DE LA PIÈCE Part Description	POIDS Weight
----------------------	-------------------------	--------------------------------	---	-----------------

39 D2741
BLADE
(39) D2741
JOB 190927

137,

1 BOITE DE BOIS

TYPE DE CONTENEUR Container Type	# DE CONTENEURS # Of Containers	COMMENTAIRES CONTENEUR Container Comments
-------------------------------------	------------------------------------	--

BOITE DE BOIS 1

CERTIFICAT

EXPÉDIÉ PAR:
Shipped by:

QUANTITÉ EXPÉDIÉE / Quantity Shipped : 39

POIDS EXPÉDIÉ / Weight Shipped : 137,00

QUANTITÉ RESTANTE / Quantity Remaining : 0

POIDS RESTANT / Weight Remaining : 0,00

APPROUVE

CERTIFICAT

QUANTITÉ EXPÉDIÉE Quantity Shipped: 39

POIDS EXPÉDIÉ / Weight Shipped : 137,00

Signature:

Date:

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
334971	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
42808	N/A	4130		

SPÉCIFICATIONS DU PROCÉDÉ

processing specifications

SEL HARDEN
HARDEN AND TEMPER
SAE AMS 2758/1 REV.F

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	34 - 40 HRC	39	39 - 40 HRC (907)

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
39	137	D2741 BLADE (39) D2741 JOB 190827 1 BOITE DE BOIS

COMMENTAIRES / comments

APPROUVÉ par / Approved by:

DATE: 2019-04-03

Pierre Piché
Chief Inspector



METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8
Tél.: 450-473-1884
Télécopieur / Fax administration: 450-491-5498
Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé
Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
334971	1

CLIENT / customer 215

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY ON K6A 1K7

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
42896	N/A	4130		
<u>SPÉCIFICATIONS DU PROCÉDÉ</u> processing specifications				
SEL HARDEN HARDEN AND TEMPER SAE AMS 2759/1 REV.F				
EXIGENCE / requirement	SPÉCIFICATIONS / specified		TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	34 - 40 HRC		39 (907)	39 - 40 HRC
TENSILE	152 - 182 KSI		1 Metcor report# 5962; RL	180.1 - 180.1 KSI
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
39	137	D2741 BLADE (39) D2741 JOB 190927 1 BOITE DE BOIS		

COMMENTAIRES / comments

SALT HARDEN 1575F 40 MINS
SNAP TEMPER 400F 2:00 HRS
TEMPER 875F 3:00 HRS
RETEMPER 900F 4:00 HRS

Heat treatment (HT) was performed with equipment that meets the requirements of AMS2759 & AMS2750. All HT operations were in compliance with AMS2759 and all verifications have been performed and documented. No unauthorized changes were performed in regards to the HT. We certify that the material was manufactured, sampled, tested and inspected in accordance with AMS2759 and the purchase order and was found to meet the requirements. This document and any attached documents may contain confidential or proprietary information and may be subject to export control laws and regulations. If you are not the intended recipient, you are notified that any dissemination, copying of this e-mail and any attachments thereto or use of their contents by any means whatsoever is strictly prohibited. Unauthorized export or re-export is prohibited.
Le traitement thermique (TT) a été fait en utilisant des équipements en conformité avec AMS2759 et AMS 2750. Le TT a été fait tel que requis par AMS2759 et toutes les vérifications et les tests demandés ont été faites et documentés. Aucun changement n'a été faite par rapport au TT. On certifie que le matériel a été fabriqué, échantillonné, testé et inspecté.

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
334971	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

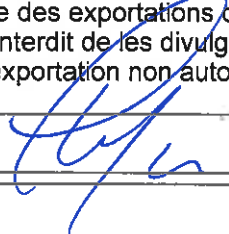
1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

Aucun changement n'a été fait par rapport au 11. On certifie que le matériel a été fabriqué, examiné, testé et inspecté en accord avec AMS2759 et le bon de commande et le matériel rencontre les exigences spécifiées.
Ce document et les documents qui lui sont joints peuvent contenir des informations confidentielles, être soumis aux réglementations relatives au contrôle des exportations ou ayant un caractère privé. S'ils ne vous sont pas destinés, nous vous signalons qu'il est strictement interdit de les divulguer, de les reproduire ou d'en utiliser de quelque manière que ce soit le contenu. Toute exportation ou réexportation non autorisée est interdite.

APPROUVÉ par / Approved by:  Lucie Desmarais
QA Technician  DATE: 2019-04-04



Apr 4, 2019

ASTM E8 / 0.2% OFFSET YIELD / 1" GL.(4d)

Report No. 5962

Test Date 04-Apr-19 Testing Machine STM-100KN 0211506

Client DART AEROSPACE

Operator Rachid Louriachi

Material 4130

PO 42896

W.O. 334971

Part # D2741

Load Cell S/N (TV110012), Units (LBS)

22480

Crosshead Speed (Inches / min) or Rate 0.5

Displacement Sensor

EZ.1-1 (5286)

Notes Results are in compliance with customer and specification requirements.

Test No	Specimen ID	Diameter (in)	Yield (kpsi)	Tensile (kpsi)	Total Elong (%)	RA (%)
13325	334971-1	0.249	170.0	180.1	17.4	59.7
Mean		0.249	170.0	180.1	17.4	59.7
Std Dev						
Specification (min)			141.0	152.0		
(max)				182.0		

By:  Date: Apr 4, 2019

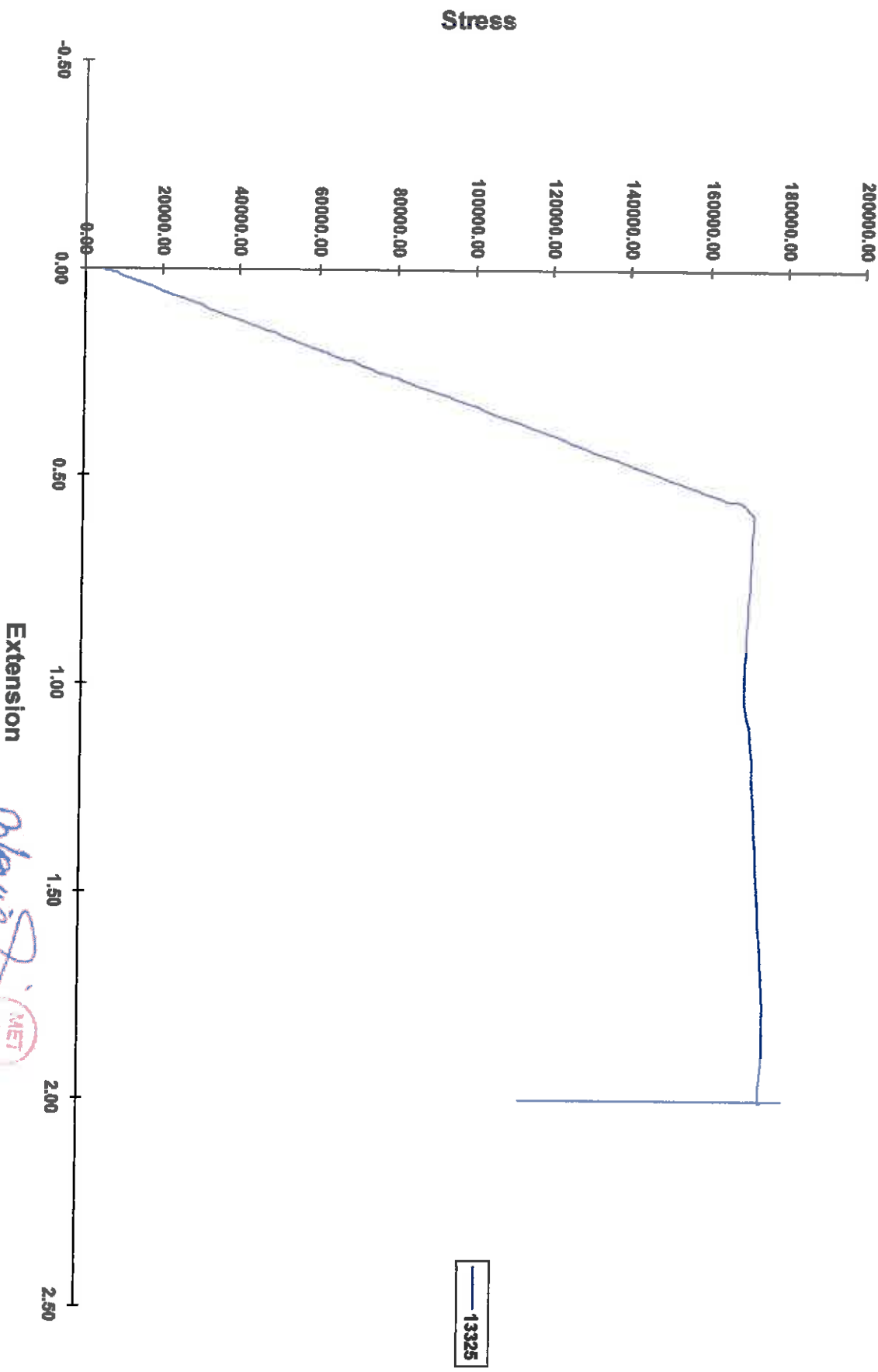
Test Performed in Accordance with ASTM E 8, Rev. 16a

Metcor 560 Boul Arthur-Sauve St-Eustache, Quebec J7R 5A8 TEL 450-473-1884 FAX 450-491-5498



Report No 5962 ASTM E8 / 0.2% OFFSET YIELD / 1" GL.(4d)

Stress (Lbs / Inchee ") vs Extension (%)



Stress

Extension

13325

Template 100

Testing Machine STM-100KN 0

Metcor 560 Boul Arthur-Sauve St-Eustache, Quebec J7R 5A8 TEL 450-473-1884 FAX 450-491-5498

Apr 4, 2019

By :

[Signature]

MET 64

Entered:
Date: July 5, 2019



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only ☐

NCR No. 19-7282

Job: 190927
Part No. D2741

DISPOSITION
Rework ☐
Scrap ☒
Use-as-is ☐

DEPARTMENT/PROCESS
Cross tube ☐
Small Fab ☐
Finishing ☐

Skid-tube ☐
Machining ☐
Large Fab ☐

Engineering ☐
Water Jet ☐
Supplier ☒
Quality ☐

QTY Affected: 1

Sequence #: 180 QCG

Date: APR 10 2019

Description Work Order Deviation

Disposition

- ONE PART SCRAPPED AT OUTSOURCE DUE TO TESTING.

- SCRAP

MRB (OSI042)

DAS 55
9-89 14-07-05

Completed By [Signature]

Lead hand / Supervisor
lean huc menand

[Signature] 14-07-05

QC/ QA Coordinator

DAS 55
9-89 14-07-05

Root Cause

Operator ☒
Manufacturing Process ☒
Equip/Tooling ☐
Handling/Preservation ☐
Material ☐
Product Improvement ☐
Process Improvement ☐
Human Factors ☐

FAULT CATEGORY

Pressure/Forced ☐
Bending ☐
Crushing ☐
Cracks ☐
Crimp/Kink/Ripple/Wave/Twist ☐
Marks/Chatter ☐
Mislabeled ☐
Other/Details: ☐

Contamination ☐
Misaligned/off center ☐
BOM/Route ☐
Broken/Damage/Defect ☒
Incomplete/Unclear Instructions ☐
Drill Holes ☐
Fit/Function ☐

Power Loss/Surge ☐
Folio/Program ☐
Grain Direction ☐
Weld ☐
Wrong Stock Pulled ☐
Out of Sequence ☐
Off-set/Set-up ☐

Positioned Wrong ☐
Outside Tolerance ☐
Drawing ☐
Finish ☐
Part Lost/Missing ☐
Misread ☐